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09/996,485	11/27/2001	Krishna Sundaresan	081862.P255	2692

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EXAMINER

NG, CHRISTINE Y

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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09/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/996,485

Applicant(s)

SUNDARESAN ET AL.

Examiner

Christine Ng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 and 34-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 and 34-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 45 recites the limitation "said ATM PNNI network" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 47 recites the limitation "said ATM PNNI network" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 54 recites the limitation "said ATM PNNI network" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 56 recites the limitation "said ATM PNNI network" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-20, 34-42 and 44-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,956,821 to Szviovski et al in view of U.S. Patent

No 7,092,356 to Rabie et al, and in further view of U.S. Patent No. 7,016,975 to Dolgonow et al.

Referring to claims 12, 34, 44 and 53, Szviatovszki et al disclose in Figure 3 a method comprising:

a) Updating (step 36) an understanding of a network after reception of information, said information describing bandwidth which has been allocated to specific priority levels of a bandwidth resource, said bandwidth resource within said network. A path with a certain priority level and bandwidth is requested from node S to node T at steps 30 and 32. At step 36, the bandwidth reservations for the network links are determined. "For each link, the maximum bandwidth and available bandwidth are noted at each priority level." Refer to Column 5, lines 34-43.

b) Determining (steps 38, 40, 42, 44) a path through said network for a requested connection, said path determined in light of said updated understanding, said requested connection having a priority level, wherein said determined path results in one or more connections being dropped in order to allow bandwidth for said requested connection, each of said dropped connections having a lower priority level than said priority level of requested connection. The final path that is chosen for the requested connection is the path the pre-empts the lowest priority level or the most amount of unreserved bandwidth at the lowest priority level. Refer to Column 5, lines 44-58 and Column 7, lines 29-56.

Szviatovszki et al do not disclose that the network is an ATM PNNI network.

Rabie et al disclose an ATM PNNI system that supports different ATM service categories of CBR, rt-VBR, nrt-VBR, ABR and UBR. In Figure 1, a connection

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admission control (CAC 22) attached to nodes 14, 16 and 18 controls connection requests and path establishments from source 10 to destination 12 along links 12. In Figure 4, the bandwidth of link 48 is allocated to the different ATM service categories. Pool 50 services CBR and rt-VBR and is assigned 30% of the link capacity, and pool 52 services nrt-VBR, ABR and UBR and is assigned 70% of the link capacity. Each pool is also assigned a overbooking factor. Lower class pools are usually more overbooked than higher class pools, thereby ensuring that real time data associated with a higher class pool has a greater probability of being admitted. Refer to Column 1, lines 12-34; Column 1, line 66 to Column 2, line 40; Column 4, lines 25-45; and Column 5, lines 1-40. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the network is an ATM PNNI network. One would have been motivated to do so in order to assign different bandwidths to different priority classes in the ATM system, so that higher priority traffic will be transmitted before lower priority traffic.

Szviatovszki et al also do not disclose PTSE information.

Dolganow et al disclose that an ATM PNNI network, nodes flood PTSE's through the network to inform other nodes of updated information about the links including available bandwidth, cost, and QoS. The source nodes uses the PTSE's to choose the best route. Refer to Column 5, line 62 to Column 7, line 8. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include PTSE information. One would have been motivated to do so since PTSE's are used in ATM PNNI networks to determine network state information.

Referring to claims 13, 15, 35, 37, 45, 47, 54 and 56, Szviatovszki et al disclose in Figure 3 that the bandwidth resource is the bandwidth of a link that resides within said ATM PNNI network or a portion of the bandwidth that resides within said ATM PNNI network. Refer to Column 5, lines 34-58.

Referring to claims 14, 16, 36, 38, 46, 48, 55 and 57, Szviatovszki et al do not disclose that said PTSE information is a Horizontal Link PTSE information type.

Dolganow et al disclose that an ATM PNNI network, nodes flood PTSE's through the network to inform other nodes of updated information about the links including available bandwidth, cost, and QoS. Horizontal Link PTSE is one type of PTSE. Refer to Column 3, lines 25-32; and Column 9, lines 43-49. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that said PTSE information is a Horizontal Link PTSE information type. One would have been motivated to do so in order to include information describing the horizontal link state.

Referring to claims 17, 39, 49 and 58, Szviatovszki et al do not disclose that said PTSE information describes a CBR service and said requested connection can be established within said CBR service.

Rabie et al disclose an ATM PNNI system that supports different ATM service categories of CBR, rt-VBR, nrt-VBR, ABR and UBR. In Figure 4, the bandwidth of link 48 is allocated to the different ATM service categories. Pool 50 services CBR and rt-VBR and is assigned 30% of the link capacity, and pool 52 services nrt-VBR, ABR and UBR and is assigned 70% of the link capacity. Refer to Column 1, lines 12-34; Column

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1, line 66 to Column 2, line 40; Column 4, lines 25-45; and Column 5, lines 1-40.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that said PTSE information describes a CBR service and said requested connection can be established within said CBR service. One would have been motivated to do so in order to include a CBR class to support high priority services.

Referring to claims 18, 40, 50 and 59, Szviatovszki et al do not disclose that said PTSE information describes a VBR service and said requested connection can be established within said VBR service.

Rabie et al disclose an ATM PNNI system that supports different ATM service categories of CBR, rt-VBR, nrt-VBR, ABR and UBR. In Figure 4, the bandwidth of link 48 is allocated to the different ATM service categories. Pool 50 services CBR and rt-VBR and is assigned 30% of the link capacity, and pool 52 services nrt-VBR, ABR and UBR and is assigned 70% of the link capacity. Refer to Column 1, lines 12-34; Column 1, line 66 to Column 2, line 40; Column 4, lines 25-45; and Column 5, lines 1-40.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that said PTSE information describes a VBR service and said requested connection can be established within said VBR service. One would have been motivated to do so in order to include a VBR class to support high priority services.

Referring to claims 19, 41 and 51, Szviatovszki et al do not disclose that said PTSE information describes an ABR service and said requested connection can be established within said ABR service.

Rabie et al disclose an ATM PNNI system that supports different ATM service categories of CBR, rt-VBR, nrt-VBR, ABR and UBR. In Figure 4, the bandwidth of link 48 is allocated to the different ATM service categories. Pool 50 services CBR and rt-VBR and is assigned 30% of the link capacity, and pool 52 services nrt-VBR, ABR and UBR and is assigned 70% of the link capacity. Refer to Column 1, lines 12-34; Column 1, line 66 to Column 2, line 40; Column 4, lines 25-45; and Column 5, lines 1-40. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that said PTSE information describes an ABR service and said requested connection can be established within said ABR service. One would have been motivated to do so in order to include an ABR class to support lower priority services.

Referring to claims 20, 42, 52 and 60, Szviatovszki et al do not disclose that said PTSE information describes a UBR service and said requested connection can be established within said UBR service.

Rabie et al disclose an ATM PNNI system that supports different ATM service categories of CBR, rt-VBR, nrt-VBR, ABR and UBR. In Figure 4, the bandwidth of link 48 is allocated to the different ATM service categories. Pool 50 services CBR and rt-VBR and is assigned 30% of the link capacity, and pool 52 services nrt-VBR, ABR and UBR and is assigned 70% of the link capacity. Refer to Column 1, lines 12-34; Column

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1, line 66 to Column 2, line 40; Column 4, lines 25-45; and Column 5, lines 1-40.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that said PTSE information describes a UBR service and said requested connection can be established within said UBR service. One would have been motivated to do so in order to include a UBR class to support low priority services.

5. Claims 21, 22 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,956,821 to Szviovski et al in view of U.S. Patent No 7,092,356 to Rabie et al in view of U.S. Patent No. 7,016,975 to Dolgonow et al, and in further view of U.S. Patent No. 6,603,764 to Epley.

Referring to claims 21 and 43, Szviovski et al do not disclose that the method further comprises issuing a SETUP message in order to establish said path through said network for said requested connection.

Epley discloses a method for setting up a connection in an ATM system. A first ATM device requesting a connection sends a SETUP message to a second ATM device. The second ATM device returns a CONNECT message to the first ATM device which includes the VPI/VCI for the requested path. Refer to Column 1, line 61 to Column 2, line 26. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include issuing a SETUP message in order to establish said path through said network for said requested connection. One would have been motivated to do so in order to send a message to the destination to begin path setup.

Referring to claim 22, Szviatovszki et al do not disclose that the method further comprises receiving said SETUP message and returning a CONNECT message in response.

Epley discloses a method for setting up a connection in an ATM system. A first ATM device requesting a connection sends a SETUP message to a second ATM device. The second ATM device returns a CONNECT message to the first ATM device which includes the VPI/VCI for the requested path. Refer to Column 1, line 61 to Column 2, line 26. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include receiving said SETUP message and returning a CONNECT message in response. One would have been motivated to do so in order to acknowledge the setup request.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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August 30, 2007


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